Economic Development in the Democratic People's Republic of Korea

FRONT COVER:
The 10,000-ton press made by the workers of
the Ryongsong General Machine Bureau

Economic Development in the Democratic People's Republic of Korea

by Prof. & Dr Hong Sung Un

Foreign Languages Publishing House
Pyongyang, Korea
1990

CONTENTS

PREFACE 1

1. THE PATH CHOSEN BY KOREA FOR THE DEVELOPMENT OF ITS ECONOMY 3

   1) The Main Obstacle to the Development of Economy in the Countries Which Newly Attained Independence after the Second World War . . . 3

   2) The Path of Building an Independent National Economy 4

   3) The Building of an Independent National Economy and International Economic Cooperation 10

2. UNTIL ITS CONVERSION INTO A SOCIALIST INDUSTRIAL POWER 12

   1) The Economic Situation after Liberation 12

   2) Two Times of Reconstruction 13

   3) Industrialization 20

   4) Cooperativization of Agriculture and Technological Reconstruction 30

   5) Conversion of Korea into a Socialist Industrial Power 37

3. FOR THE JUCHE-ORIENTATION, MODERNIZATION AND SCIENTIFIC REMODELLING OF THE NATIONAL ECONOMY 40

1) Consolidation and Development of the Successes in Industrialization and Three Objectives of the Technical Revolution 40

2) Juche-Orientation, Modernization and Scientific Remodelling of the National Economy 43

3) Economic Growth in the 1970s 45

4) Economic Growth by the First Half of the 1980s 49

5) Features of Today's Economy 53

4. PROSPECTS OF ECONOMIC DEVELOPMENT . 59

1) The Regulation Period 59

2) The Third Seven-Year Plan 60

PREFACE

"The Democratic People's Republic of Korea is a country which should have already been known widely in the world, but it is not. This is a matter of regret.

"Many of the developing countries fail to advance normally due to various difficulties, but Korea alone is making rapid progress coping successfully with all problems for the building of a new society. The rate of progress in Korea is enviable. It is not for nothing that the people of the world should be desirous of knowing Korea's successes and experiences and learning from them."

This is a remark of Dr. S. K. Laroya of the economy chair of the Hans Laz College of Delhi University in the Republic of India.

Remarks like this can be heard often from many foreign friends who have had contacts with the realities of Korea.

Before the Second World War Korea was a colony and very backward. To add to this, after liberation some ten years had to be spent in a war and reconstruction work twice. It was only in 1957 that Korea started rebuilding the economy.

Moreover, a highly strained situation continued so that we were unable to bend efforts on peaceful construction alone.

Nevertheless, the Korean people under the wise guidance of the great leader Comrade Kim Il Sung and the Workers' Party of Korea moved ahead a long way overcoming all the difficulties with faith in their own capabilities.

I would not deal with all branches of the Korean economy in this book but mainly refer to the development of industry and agriculture.

I shall be pleased if this humble work can give some help to the reader.

Author

February 1990

1. THE PATH CHOSEN BY KOREA FOR THE DEVELOPMENT OF ITS ECONOMY

1) The Main Obstacle to the Development of Economy in the Countries Which Newly Attained Independence after the Second World War

The countries which became independent after the Second World War gained new possibilities of economic progress. These countries groped in various ways for the methods of extricating themselves from the backward position by utilizing the existing possibilities. In this process, a variety of slogans and policies were put up expressing their aspirations and realities.

Meanwhile, the Second World War resulted in the high tide of the national-liberation movement in the colonial dependent countries and the collapse of the colonial system, so that imperialism faced the menace of losing its lifeline. This gave rise to neo-colonialism.

Instead of colonial rule with an iron hand as in the past, the imperialists took the path of subordinating the newly-independent and developing countries politically and economically by means of giving "aid", recognizing their sovereignty nominally. So, the surplus capital of the imperialist countries was exported in a big way to the newly-independent and developing countries under various names and the lever of control over these countries' economy remained in the hands of the imperialists as ever.

As a result, their possibilities of economic progress created after the Second World War were going in reality to be erased. The situation was little different from this in the regions and countries where industrialization was carried out with the investments and loans from the West. The common features in these regions and countries are that their economic structure is of a predominantly exporting type and that they depend on other countries for nearly all strategic materials. Their economic artery is in the grip of the multinational enterprises of the Western capitalist countries.

The transactions of multinational enterprises with the outward appearance of international dealings are in many cases those between the parent companies and the daughter firms within the multinational enterprises, and it is said that such dealings now make up nearly 30 per cent of the world trade turnover. It goes without saying that the ones that get enormous gains in these transactions are the parent companies, that is, the imperialists.

On the other hand, the backward countries saddled with increasing foreign debts were confronted with many difficult and complex problems internally and externally.

2) The Path of Building an Independent National Economy

From the first days of liberation Korea took the path of developing the economy on the principle of self-reliance rather than drawing in foreign capital or turning to other countries for loans, and moved forward along the road of building an independent economy instead of relying on foreign markets.

Comrade Kim Il Sung, the great leader of the Korean people, said when he wound up the Congress of the Provincial, City and County People's Committees of North Korea in February 1947, that is, soon after liberation:

"To build an independent democratic state, an independent economic base must be built without fail, and to lay this base, the national economy must be developed rapidly. Without an independent economic base we can neither achieve independence, nor build a state and maintain our existence."

He originated the Juche idea and set out the Juche line of the Korean revolution during the anti-Japanese revolutionary struggle, and in 1936 founded the Association for the Restoration of the Fatherland clarifying in its Programme the far-reaching plan of attaining the economic independence of the country to be liberated in the future.

After achieving the historic cause of national liberation, he set forth the line of building an independent national economy and gave wise guidance for its thorough implementation, thereby making it possible to attain successes as of today in a brief historic period.

What Is the Reason for Taking the Path of Building an Independent Economy?

The line of building an independent national economy is the embodiment of the Juche idea in the domain of economic construction.

The Juche idea as a man-centred philosophical thought considers that man occupies the position of the master in the world and plays the decisive role in its development. It follows from this that the proposition "Man is the master of everything and decides everything" is the underlying principle of the Juche idea.

The Juche idea has stated definitely that man is a social being with Chajusong, creativity and consciousness. It can be said that man is the master of everything because he has Chajusong and that he plays the role of the world's reformer because he has creativity.

At the present historical stage each people live and carve out their destiny in their own country. As long as this state of affairs continues, the destiny of the popular masses and their country cannot be considered separately. It was a bitter experience of many peoples including the Koreans in the past that when a country is subordinated, its people will be doomed to slavery.

Since social life is led and developed with the country as the unit, each country should have its own economic life and capacity. This is first because an independent national economy is the material basis for the country's political independence and Chajusong.

As people cannot enjoy the dignity as human beings when they are socially deprived of Chajusong and live as slaves, a country without Chajusong cannot have genuine independence and prosperity.

In order to materialize its political Chajusong, a country should work out all its lines and policies independently in keeping with the actual conditions, and carry them out by itself. This requires its own economic strength.

As the Korean saying goes, "To borrow is to go into slavery," a country economically subordinated to another country will be controlled by the latter politically as well and will have no choice but to do its biddings.

It is secondly because an independent national economy is the material guarantee for ensuring the position of the master of the state and society to the people.

The working people should throw off not only the social bondage but also the yoke of nature. To throw off the yoke of nature means getting rid of hard and difficult labour to make work easy and enjoyable and leading a material life of abundance as one pleases. Only then will the working people be able to live and develop as masters of nature and the people who have become the masters of the state and society be materially guaranteed their position.

As long as nations and states exist, the question of ensuring the working people's social and political Chajusong and their extrication from the yoke of nature are raised and solved within the bounds of each national state. Just as the people of each country secure their position as the masters of the state and society on their own, the question of materially guaranteeing their position as such should be solved by the efforts of the people of each country themselves and not with the help of any other people.

It is thirdly because an independent national economy is the material guarantee for eliminating the existing basis of inequality and attaining the Chajusong of nations.

No nation will tolerate infringement on its Chajusong and every nation struggles to attain and defend it. In order to attain the Chajusong of nations, national inequalities should be obliterated.

These inequalities have two causes in the main. One of them is the social and political cause and the other is economic backwardness. Economic backwardness, it can be said, is the real basis and material cause of national inequalities.

Therefore, the nations that have achieved political independence are confronted with the task of obliterating the exploitation of man by man, making working nations of themselves and creating highly developed economic power, an independent national economy, for themselves.

After liberation Korea took the path of building and developing an independent national economy in order to put an end to the national tragedy of the past when it had been humiliated because of its economic impotence and achieve national dignity and Chajusong.

The Basic Substance of the Building of an Independent National Economy

Pointing out that building an independent national economy means building an economy which stands on its own feet and serves its people, President Kim Il Sung said that this economy is a comprehensive economy which works by itself, is developed versatilely and equipped with up-to-date technology, and a popular economy which meets the needs of the economic construction and people's livelihood in one's own country mainly with its own products.

The building of an economy operated with one's own resources and technology and by one's own personnel constitutes an important content of the building of an independent national economy.

One's own domestic resources have their part in the operation of the independent economy as objects of labour.

Relying on domestic resources is necessary and beneficial in many ways for the building of an independent economy. Turning to the domestic resources for the supply of raw materials is profitable because the economy will suffer little impact of the foreign markets and also because it will provide the possibility of obtaining cheap raw materials meeting the needs in quality and quantity.

Relying on domestic resources is also necessary to build an independent structure of the economic branches. In particular, in the light of the actual situation of today when the raw material and fuel crises have become chronic on the worldwide scale, it is an important guarantee for the independent, continuous and rapid development of the economy to go in the direction of relying on one's own resources as far as possible.

Reliance on domestic resources is also advantageous for developing one's own technology in keeping with the actual conditions.

The modern history of production shows that demands arose first and efficient methods of production would be devised only after the raw materials and fuels were discovered to meet the demands. The system of iron manufacture with coking coal which is in wide use even now originated in England because that country had abundant resources of high-quality coking coal capable of melting iron ores. And the Thomas converter steel-making process was invented due to the actual conditions in which largely phosphorous iron ores had to be used.

Korea has no coking coal resources, so an iron-making process using not coking coal but anthracite of which the country has abundant deposits has been studied and introduced. This is also an instance of following the course of developing technology by relying on one's own domestic resources.

Further, an independent national economy is operated by its own technology. One's own technology comprises the technical know-hows developed in one's country and those introduced from abroad to suit one's actual conditions. One's own technical skills are distinguished from others', but to develop one's own technical skills does not conflict with the introduction of advanced techniques from abroad. It will be advantageous to introduce and make proper use of foreign technical skills, even though invented and developed by others, to suit one's actual conditions when one's country needs them.

As long as one relies on foreign technology, it will be impossible to build an independent economy. It is not for nothing that in recent years the voices "Let's develop our own technology to check the technological monopoly of the West" are raised in the developing countries.

To develop and draw on one's own technology is also necessary to tap and use the resources of one's country well.

An independent national economy is worked by its own personnel. Without its own personnel an independent national economy can neither be built nor operated. Foreigners cannot build up or operate the economy of another country in line with the latter's and its people's interests and wishes.

The part and parcel of the building of an independent national economy is to build an economy which is versatilely developed and equipped with up-to-date technology.

An independent national economy is an economy of versatile development. The versatile structure of the economy will contribute to the satisfactory guaranteeing of the independent character of the economy only when it is comprehensive and well-proportioned.

It can be considered a general tendency that the economy becomes more diversified with the development of the productive forces. But diversity does not always means comprehensiveness.

As can be seen often, if the branches of raw materials production are extended multilaterally while the manufacturing industries are weak, or vice versa, and if the production processes from the process of primary production to that of finished goods production are incomplete, such economic structures cannot be considered comprehensively developed ones.

The independent character of the economy is guaranteed by the balance of its many-sided structure.

Enlarged reproduction can be realized without a hitch only when the economic structure is complete and the economic branches are organically related and proportionately develop.

Therefore, it can be said that the independent character of the economy is firmly ensured when the economy has a comprehensive structure to enable its many-sidedly developed branches to carry on enlarged reproduction smoothly and operates in a balanced way.

An independent national economy is an economy equipped with modern technology. The independent character of the economy should be guaranteed not only by its structure but also by its technological equipment.

Korea took the road of building such an economy after liberation, and has built firmly an independent economy of that kind.

3) The Building of an Independent National Economy and International Economic Cooperation

Those people who are apt to slander the independent national economy like to say often that it is an "isolated" or a "closed" economy. This is an utter nonsense.

Building an independent national economy never means refusing international economic cooperation and producing and supplying on one's own everything that is needed for carrying on the economic life of the country and the people.

It is practically impossible and unreasonable in the developed modern economy to meet all of the increasing domestic demands by oneself.

Multifarious demands arise ceaselessly in the process of building and developing an independent national economy. And every country is obliged to meet its needs to the extent corresponding to its natural and economic conditions and level of the productive forces at the given time.

On the other hand, the size and composition of the demands and the conditions for and level of economic development differ from country to country, and this causes difference in the variety and quantity of the raw materials and goods produced in different countries.

Even in case an independent economy is built, it should be based on the country's natural and economic conditions and conform to its own actual situation. This gives rise to the difference in the structure of social production of the countries and in the size and composition of their demands for and supply of social products.

Therefore, the countries building and developing an independent economy should produce on their own such goods as of fundamental importance for meeting the domestic needs and as are much in demand, and should import from other countries such things as are needed in a small quantity, are insufficient or cannot be produced by themselves.

This is realistic and, at the same time, is reasonable for the building and development of an independent national economy.

The building of an independent economy urgently demands the development of economic and technical cooperation between countries.

2. UNTIL ITS CONVERSION INTO A SOCIALIST INDUSTRIAL POWER

1) The Economic Situation after Liberation

Korea was liberated from the colonial yoke of Japan in August 1945. Before liberation her economy was very backward, it was of a colonial semi-feudal nature.

The colonial nature of Korea's economy was apparent in the fact that the major means of production in the country were in the monopolistic possession of Japan and, in particular, that all branches of industry were completely controlled and dominated by the monopoly capital and colonial ruling machine of Japan.

In 1944, the investments of Japanese capital made up 97 per cent of the total amount of capital investments in the economy of Korea and Japanese capital ruled the roost in all industrial branches.

The structure of industrial production had colonial lopsidedness and deformity and, in particular, the manufacturing industries lagged behind. The engineering and light industries were practically nil in north Korea. In the closing years of colonial rule, for instance, the output of the engineering and metalworking industries occupied only 1.6 per cent of the total industrial production. In 1944 the textile industry turned out no more than 0.14 metre of cloth per capita, and the daily necessities industry was unable even to manufacture pencils.

Therefore, the Provisional People's Committee of North Korea established in February 1946 placed the question of producing pencils as an item on the agenda of its first session in order to give education to the liberated people and schoolchildren. This is on the records of history.

The geographical distribution of the productive forces was also extremely biassed. The industries were located mainly in the coastal areas for the convenience of transporting the products to Japan.

Rice mills, ginneries, metalworking factories and the like were such cases in point. Even the mining industries were developed mainly in the coastal areas.

Before liberation feudalistic relations were prevalent in the countryside of Korea. Immediately after liberation, north Korea had 44,000 landlords owning more than five hectares of land, and over 720,000 poor and hired peasants who tilled their land.

Tenant farming which accounted for the greatest part of the agricultural economy was not rid of primitive methods of farming and its productivity was very low. The total grain production of north Korea before liberation was 2,167,000 tons at most annually. The agricultural economy continued on its way to ruin owing to the merchandise and labour power situation of Japan while being subjected to the exploitation of feudalistic land rent in kind.

2) Two Times of Reconstruction

Work after Liberation

There were many things to be done after liberation. Before anything else, the anti-imperialist, anti-feudal democratic revolution had to be carried out to do away social and economic relations. To this end, democratic social and economic reforms such as the agrarian reform and the nationalization of major industries were effected.

The agrarian reform was carried out in March 1946 on the principle of giving land to the tillers and by the method of confiscation and distribution without compensation. Through the agrarian reform 1,000,325 hectares of land owned by the Japanese imperialists, pro-Japanese elements, traitors to the nation and landlords possessing more than five hectares was confiscated, of which 981,390 hectares was distributed to over 720,000 poor and hired peasants.

The nationalization of major industries was carried out in August 1946 by means of confiscating at a time all the factories, mines, power stations, railway transport, post and telegraphic facilities, banks, commercial establishments and cultural institutions belonging to the Japanese imperialists and traitors to the nation. As a result, over 1,000 important industrial establishments accounting for more than 90 per cent of all the industries were nationalized. Non-comprador capitalists' possessions were excluded from the nationalization of major industries, and their business activities were protected by law and encouraged.

With the accomplishment of the anti-imperialist, anti-feudal democratic revolution through the democratic reforms including the agrarian reform and nationalization of major industries, our country gradually entered the period of transition to socialism and the social and economic conditions for the rehabilitation and development of the national economy were created.

For the purpose of rehabilitating and developing the national economy, the existing heavy industrial factories were rehabilitated and put in order, so that raw and other materials necessary for the development of the economy were produced and supplied, and, at the same time, the work of creating light industry and balancing it with heavy industry and of developing agriculture was started.

Along this line, the economic plans for 1947 and 1948 and the two-year national economic plan (1949-1950) were carried out. All these economic plans were successfully fulfilled as a result of great patriotic enthusiasm and creative activity displayed by the working people.

Thus, the conditions came to ripen for propelling the building of an independent national economy in good earnest in Korea.

But the war unleashed by the US imperialists on June 25, 1950, brought our peaceful construction to a halt.

Characteristics of the Period of Postwar Reconstruction

In Korea the economy was rebuilt twice. Immediately after liberation the economy wrecked by the fleeing Japanese rogues who had been defeated in World War II had to be rehabilitated, and then again it was reconstructed because it had been devastated by the American scoundrels during three years of the Korean war (June 1950-July 1953).

When the war ended, everything had been demolished and what was left behind was literally heaps of debris. The US imperialist aggressors dropped an average of 18 bombs per one square kilometre of north Korea. They showered over 428,700 bombs on Pyongyang, its capital city, and this figure was larger than the number of its inhabitants.

Farmlands, reservoirs, schools, hospitals and dwelling houses throughout the country, to say nothing of factories and other enterprises, were all destroyed, and the people lost all their household furnishings and utensils. The rehabilitation and development of the economy were started in the difficult situation after the war when people were sorely perplexed as to what to start with.

Further, in the postwar period the economy had to be rehabilitated and developed in anticipation of future industrialization. This was the feature of those days different from the time right after liberation. Immediately after liberation the rehabilitation work was carried on with an eye to restoration to the status quo ante before anything else, and it was planned to start the reconstruction of the economy from about 1950. But this was balked by the outbreak of war in 1950. In such conditions it was estimated after the war to develop the economy as anticipated in spite of the indescribably difficult conditions.

Therefore, after the war Korea decided to rehabilitate and develop the economy by all means along the line of preparing for industrialization, and embarked upon it.

The Basic Line of Postwar Economic Construction and the Building of an Independent National Economy

The postwar rehabilitation and development of the economy with an eye to industrialization required a correct line of economic construction.

The great leader Comrade Kim Il Sung said at the Sixth Plenary Meeting of the Central Committee of the Workers' Party of Korea on August 5, 1953, immediately after the truce:

"In postwar economic construction we must follow the line of giving priority to the rehabilitation and development of heavy industry and simultaneously developing light industry and agriculture. This alone will enable us to consolidate our economic base and rapidly improve the people's life."

Needless to say, it was not an easy job carrying out the line of priority growth of heavy industry with the simultaneous development of light industry and agriculture in the difficult conditions of the postwar period. For all that, we had to follow this road and believed that we were capable of carrying out this line.

Since the postwar rehabilitation and development of industry had future industrialization in view, the preferential development of heavy industry was raised as an important task of postwar rehabilitation and development. Moreover, this was also due to the most dreadful wrecking of heavy industry in the war.

Meanwhile, it was impossible to defer the rehabilitation and development of light industry and agriculture. To stabilize and improve quickly the livelihood of the people impoverished due to the war and put an end to the deformity of the economy it was necessary to rehabilitate and develop light industry and agriculture without delay.

In the postwar development of heavy industry the line of developing heavy industry not for heavy industry's sake but one capable of effectively serving light industry and agriculture was laid down. This was aimed at increasing the pace of enlarged reproduction by closely connecting the branches of production of means of production and consumer goods through the shortest cyclic process and, at the same time, maintaining a correct economic balance and simultaneously solving the questions of building the economic foundation and of improving the people's livelihood.

The promotion of the building of an independent national economy along the line of giving priority to the growth of heavy industry, while, at the same time, developing light industry and agriculture, was of practical significance in our country.

This line provided conditions before anything else for the many-sided development of the economic branches indispensable for the building of an independent economy. The priority growth of heavy industry brings about the many-sidedness of its inner structure by ensuring the development of all its branches with the engineering industry as its core. Its many-sided inner structure is the guarantee of versatile development of the economy as a whole.

Along with heavy industry, light industry and agriculture should be developed. The creation of its own reliable raw material base essential for the building of an independent economy, too, calls for giving priority to the growth of heavy industry while developing light industry and agriculture simultaneously.

The preferential development of heavy industry enables the production of raw and other materials needed by its own branches and also the production of a wide variety of raw materials for light industry.

At the same time, the development of light industry and agriculture makes it possible to increase the output of raw materials necessary for the production of consumer goods and for various branches of heavy industry.

The equipment of economic branches with modern technology, too, necessitates the development of light industry and agriculture along with the priority growth of heavy industry. Versatilely developed heavy industry with the engineering industry as its core alone can ensure the improvement and perfection of technological equipment of all economic branches.

Meanwhile, the development of light industry and agriculture enables heavy industry to serve effectively the technological reconstruction of light industry and agriculture and to step up the technological reconstruction of the economy as a whole.

The basic line of economic construction enabled the smooth and early establishment of an independent economic system. This was because the line provided the possibility of smoothly settling the relations between the rate of development and equilibrium in the leading economic branches, the relations between heavy industry and light industry and agriculture, the relations between enlarged reproduction, accumulation and consumption, the question of the conditions for realizing enlarged reproduction, and so on.

Postwar Rehabilitation and Development of the Economy

The truce in Korea was effected on July 27, 1953. This brought the war to a halt after three years and a month.

After the war, the Korean people were faced with the task of reconstruction. For about half a year, we carried out the tasks of the period of preparation for reconstruction and in 1954 started on the Three-Year Plan for Postwar Rehabilitation and Development of the National Economy.

The basic tasks of the Three-Year National Economic Plan were to restore the impoverished life of the people in the shortest possible time and to lay the foundation for the future development of the economy by quickly rehabilitating and strengthening the material and production foundation of the devastated industry and agriculture.

When the postwar reconstruction was started, the economic situation of the country was difficult and, moreover, the sinister moves of the factionalists lurking within the Workers' Party of Korea made things still worse. Those fellows insisted that everything should be used for immediate consumption, saying, "Too much stress is put on the building of heavy industry when the people are badly off," and "No country has ever followed such a policy." They objected to the priority growth of heavy industry and the building of the foundation of an independent economy.

The Workers' Party of Korea and the Korean people could not agree to their insistence. The Korean people firmly established Juche and resolutely rejected the unwarranted assertion and obstructive moves of the anti-Party factionalists. They held fast to the basic line of economic construction and implemented it thoroughly.

During the Three-Year National Economic Plan period funds were invested to ensure the priority growth of heavy industry.

In this period it was adopted as the basic policy to tap and use all the domestic resources to the maximum. At the same time, the work was organized to turn to good account the aid from other countries and to convert it into the source of inner accumulation.

At the same time, the sequence of priority was correctly laid down in reconstruction. In the rebuilding of heavy industry the branches closely related to the people's life were preferentially rehabilitated and developed and in the general reconstruction of industry investments were made preferentially in the objects of rehabilitation which required comparatively small amounts of funds, materials and labour. This was properly combined with new construction.

In order to boost the enthusiasm and creative activity of the masses, measures were taken to raise the ideological level of the leadership officials in the economic field and to improve their style of leadership.

As a result, the Three-Year National Economic Plan was successfully carried out.

The general plans of industrial production for the state and cooperative organizations envisaged in this plan were fulfilled in two years and a month in terms of production level and in two years and eight months in terms of total output value.

In the years 1954-1956 the production of means of production increased by an average of 59 per cent annually and the production of consumer goods by 28 per cent, topping the level of the prewar year 1949 1.7 times and 2.1 times respectively.

In consequence, the proportion of the production of means of production which had dropped during the war gradually recovered the predominance due to the priority growth of heavy industry steadily ensured during the Three-Year Plan, and the proportion of the production of means of production to that of consumer goods in the gross industrial output was 53.9 to 46.1 in 1956. This came near to the level of the prewar year 1949.

Thanks to these results, the Korean people got out of the extremely difficult position of the postwar years and were able to find their own feet and push forward the building of the economy onto a higher stage.

3) Industrialization

Laying the Cornerstones for Industrialization

In Korea industrialization was completed through the stages of laying its foundation and of its wholesale realization, and this was accompanied by the technological reconstruction of the economy.

Under the postwar Three-Year National Economic Plan industry and agriculture were rapidly rehabilitated and developed, but industry was not yet fully equipped by modern technology and the key branches of heavy industry were weak. Certain industrial branches were not yet up to the prewar level and the colonial lopsidedness of the economy was not completely obliterated.

Full realization of industrialization required the creation of more necessary conditions for it. Therefore, the stage of laying the foundation of industrialization was set first in embarking on it in order to realize it gradually while making effective use of the existing material and technical foundations.

The tasks in the stage of laying the foundation of industrialization were carried out during the Five-Year National Economic Plan beginning in1957. In order to build the foundation of industrialization, measures were taken, first of all, to fully restore certain enterprises of fuel and power industries which were not yet recovered and to rebuild, expand and perfectly equip the existing enterprises, and with this as the central task, to combine the building of new enterprises with it.

Then, great stress was put on propelling the technical revolution. Many difficulties lay in the way of the technical revolution. One that was impeding progress was the mystification of technology.

Certain people thought machinery and technology something mysterious and were captivated by the erroneous view that modern technology could not be developed in a backward country like Korea. They believed as if some selected people alone could invent and deal with machines and techniques and refused to put faith in the capacity and wisdom of the producer masses.

Seeing through this situation, President Kim Il Sung reasoned with them on their mistake and inspired strength and wisdom in the broad masses by saying that planing a board and lathing a piece of iron are the same in principle. Meanwhile, activities were started to overcome the mystification of technology through the medium of practical work for putting the working people's innovatory proposals into reality.

Thus, steps were taken to hasten technical innovation in the leading industrial branches and basic processes of production in keeping with the attained level of material and technical preparation and to widely introduce the latest achievements of science and technology while rectifying the people's thinking and rousing the masses to the technical innovation movement.

Further, the problem of meeting of needs for enormous funds had to be solved and the balance between accumulation and consumption had to be correctly maintained while increasing them. The work of tackling these problems was started.

At the time, the investments already made were not yet bringing about sufficient results and were not recovered.

But the demands for funds grew incomparably larger than before.

In view of this situation, President Kim Il Sung put forward the slogan "Let us produce more, practise economy, and overfulfil the Five-Year Plan ahead of schedule!" at the December 1956 Plenary Meeting of the Central Committee of the Workers' Party of Korea and called upon all the working people to develop a mass movement for raising their technical qualifications and skill level and the utilization of equipment, lowering the standards of consumption of raw and other materials and power and strictly abiding by the regime of economy.

Further, special attention was paid to raising the working people's enthusiasm and creative initiative and improving accordingly the working style and methods of the leadership officials.

Such measures helped to successfully push ahead with the work of laying the foundation of industrialization.

Development of Industry

The Five-Year National Economic Plan scheduled for 1957-1961 was carried out in two years and a half in terms of industrial output value and in four years in goods indices. This is why the four years' period from 1957 to 1960 came to be called the Five-Year Plan period.

Between 1957 and 1960 industrial production rose 3.5 times and the annual average rate of its growth 36.6 per cent. The rapid increase in industrial production was due before anything else to the noticeable expansion and strengthening of the production foundation of industry and to the tapping and utilization of enormous reserves.

For instance, there was only one blooming mill at the Kangson Steel Plant in 1957 and its capacity was no more than 60,000 tons.

But at least 90,000 tons of steel was needed to build cities, farm villages and factories and produce machines.

The President personally went to the workers of Kangson and explained the situation in the country and earnestly told them that if they should turn out 10,000 tons more of steel in excess of the plan, the country would be able to straighten itself. Upholding his appeal, the Kangson workers came out with determination and turned out 120,000 tons of structural steel from a blooming mill with a capacity of 60,000 tons.

The news about this spread immediately to the working people throughout the country, stirring them up to the extreme. As a result, a mass innovation movement arose in all parts of the country after the example of Kangson; the old norms were waived and labour productivity and utilization of equipment went up two or three times.

The President named this great nationwide innovation movement "Chollima Movement" and called the Kangson Steel Plant the "birthplace of Chollima."

This was the beginning of the great upswing of the building of socialism in Korea.

Moreover, tremendous local reserves were explored and put to use. This came about in the course of carrying into effect the decision of the June 1958 Plenary Meeting of the Central Committee of the Workers' Party of Korea on building by oneself more than one small or medium-size factory in each county.

From June 1958 to the close of that year over 1,000 small and medium-size factories were built with the locally available disused equipment, materials and labour power, and they came to produce a great deal of goods. These factories of local industry accounted for more than half the country's output of consumer goods in 1960.

Thus, local industry provided the possibility of concentrated investment of the limited state funds in heavy industry. Further, the development of local industry enabled the investment of the state funds earmarked for light industry in the building of large-size centrally-run light industrial factories which constituted the backbone of light industry.

In the years 1957-1960 the state capital investment in industry was made at the average rates of 82.6 per cent in heavy industry and 17.4 per cent in light industry. But in the same period the industrial production of means of production and consumer goods grew rapidly almost simultaneously at the rates of 3.6 times and 3.3 times. This was due to the contribution of local industries built through a movement of the entire people rather than state investments.

The experiences of Korea showed that it is reasonable in general to develop large factories and small and medium-sized ones simultaneously in light industry in view of its economic and technical characteristics and, in particular, that it is an effective way of increasing the output of consumer goods and rapidly developing industry as a whole in backward countries to build a large number of small local factories which require comparatively simple techniques. It can be said that the building of local industry is of great importance in developing all local areas of the country evenly and, in particular, in bringing agriculture closely to industry and gradually obliterating the distinctions between town and country.

Through the let-each-machine-tool-make-more movement enrolled by the entire masses in Korea in 1959 more than 13,000 machine tools were produced in excess of the plan in a slightly over a year, so that many new machine-building factories were built and the material and technical foundations of industry were further strengthened without spending much state funds.

During the Five-Year Plan our own heavy industrial base was built and it was capable of turning out most of the raw and other materials, fuel, power, machinery and other equipment necessary for economic development by using the domestic natural resources.

In industry the imbalance between the mining and processing industries was eliminated and the share of the processing industry rose considerably. In 1960 the shares of the mining, machine-building and metalworking industries were respectively 4, 6.8 and 21.3 per cent of industrial production.

The greatest achievement in increasing the independent nature of industry was that the machine-building industry developed into a modern and independent one.

During the Five-Year Plan, many machine-building factories were built and the existing ones were reconstructed and expanded. In 1960 the machine-building industry's share in the total value of industrial output was 21.3 per cent as against 17.3 per cent in 1956, and our country was 90.6 per cent self-sufficient in machinery and equipment as against 46.5 per cent.

Also, the inner structure of industry and the structure of varieties of products were improved.

Take the production of pig iron as 100 in the ferrous metal industry, and then the output of steel increased from 30 before liberation to 74 and that of rolled steel from 22 to 56.

Further, the chemical industry got rid of its deformity manifested in its leaning towards the production of inorganic chemical goods only, and the system of organic chemistry was created.

The key branches of light industry were expanded and consolidated and its inner structure and the variety of its products were also improved.

In 1960 the textile industry produced 189,660,000 metres of various fabrics or 19 metres per head of the population.

A great change took place in the geographical distribution of industrial production.

Thanks to these successes, the industry of Korea did away completely with its colonial one-sidedness and distortion and became diversified and independent.

Overall Industrialization

In Korea all-round industrialization was carried out during the

Seven-Year Plan which started in 1961.

The Seven-Year Plan was undertaken in the very difficult and complex situation.

Internally, with the fulfillment of the Five-Year Plan the foundations of an independent economy with the backbone of heavy industry were laid, but the general economic situation was still far from satisfactory.

Internationally, the United States keyed up the situation through the "Caribbean crisis" in 1961 and provoked the Vietnamese war through the "Bac Bo Gulf incident" in August 1964 and escalated it. The United States openly attempted to provoke another war against the Democratic People's Republic of Korea as never before. The military-political situation in Korea became unprecedentedly acute.

In those days the relations between socialist countries became worse and were experiencing difficulties because of differences of views.

Our people had to carry out the ambitious task of overall industrialization with their own efforts and, at the same time, put necessary efforts into increasing the nation's defence capacity to counter the grave situation.

Such being the situation, the Fifth Plenary Meeting of the Fourth Central Committee of the Workers' Party of Korea held in December 1962, the first year of the Seven-Year Plan, adopted the policy of simultaneously carrying on the building up of economy and defences to counter the prevailing situation. The conference of the Workers' Party of Korea held in October 1966 set forth the specific tasks for carrying on economic and defence construction simultaneously.

Accordingly, it took the measure to adjust somewhat the tempo of economic development and divert no small efforts into defence upbuilding.

In the changed situation the Seven-Year Plan which had been scheduled for 1961-1967 was extended for three years and was to be carried out in ten years from 1961 to 1970.

In the report on the work of the Central Committee to the Fourth Congress of the Workers' Party of Korea held in September 1961 President Kim Il Sung set forth the central task confronting industry in the Seven-Year Plan which was to establish an independent industrial system which was developed in a many-sided way, had its own stable base of raw materials and was fully equipped with the latest technology, by further perfecting the structure of industrial production and reinforcing its technological foundation.

Industrialization in Korea presented a historic task of building an independent modern industry.

The main task of establishing an independent industrial system was above all to diversify and develop industry comprehensively and perfect the structure of industrial production.

To this end, in those days it was necessary to re-equip and expand the existing industry, put more flesh on it and build new branches of industry and many new factories and enterprises.

The establishment of an independent industrial system required that domestic raw material, fuel and power bases be strengthened and developed.

For the purpose, it was necessary to actively explore and comprehensively use domestic resources, re-equip and expand the existing raw material, fuel and power bases, build more new bases and improve the composition of raw materials, fuel and power.

In addition, industry should have been reconstructed technologically and fully equipped with the latest technology.

Measures were taken to carry out these tasks.

Efforts were made to build the branches of industry which lacked or were imperfect and factories and other enterprises, better equip the basic processes of production and fill the gaps in them.

In addition, measures were taken to make the most of the existing economic assets and improve quality in production and construction.

These were designed to mobilize and tap the reserves which had been created during the Seven-Year Plan. In all branches of the national economy efforts were made to produce more and better with existing equipment, materials and labour and round out, strengthen and develop the existing basis of production. There was launched the mass movement to discover all kinds of latent reserves and make effective use of them, lower the norms of material consumption per unit of output and institute the regime of strict economy.

In addition, the work of developing medium and small-size industries side by side with large ones was continuously pushed ahead.

Measures were taken to energetically step up technical innovations in industry.

In Korea the technical revolution was posed as the matter of removing the essential differences of labour and freeing the working people from heavy labour.

In this period for the technical revolution it was seen to that heavy industry, particularly machine-building industry, was rapidly developed and that scientific and technological measures were taken to mass-produce new raw and other materials needed for industrial production and make wide use of substitutes. It was seen to that iron was produced with domestic fuel instead of the imported coking coal.

In modern iron manufacture coking coal is used as fuel. But our country has no deposits of coking coal but abounds in deposits of anthracite. Then, shouldn't we produce iron, using anthracite as fuel instead of coking coal?

Such is the way to establish Juche in iron industry, said President Kim Il Sung in the initial period of the Seven-Year Plan. Upholding his teaching, Korean scientists and technicians repeatedly conducted research and experiment and succeeded in producing iron with domestic raw materials.

For the technical revolution great efforts were put into solving technical problems to make effective use of domestic raw and other materials and power resources.

In the 1960s many countries of the world created and developed petrochemical industry using inexpensive petroleum as the main raw material, fuel and power resources. Then in Korea, too, some people suggested following the world trend of technical development.

President Kim Il Sung did not agree to their opinions. Industry cannot be safely and rapidly developed if one attempts to solve the question of raw materials, fuel and power drawing on the resources of other countries, therefore it is necessary to develop industry exploiting and drawing on the domestic resources, he said.

This resulted in adopting the line of further developing the organic chemical industry based on the limestone and anthracite abounding in Korea to produce various kinds of quality raw materials and of developing and using coal and water-power resources abounding in the country instead of petroleum to produce electric power.

In order to carry on the technical revolution it was seen to that the medium- and small-size local factories which had been built in great numbers with the active assistance of the factories under central authority were placed on the basis of latest technology as a whole.

In Korea the task of industrialization was carried out in 14 years from 1957 to 1970. Our people take pride in the fact that they have established the independent system of modern industry by their efforts under the sustaining tense situation despite the country's backwardness and utter ravage.

The annual average rate of growth of industrial production was 19.1 per cent during the whole period of industrialization and 12.8 per cent during the Seven-Year Plan.

The solid base of industry has been laid with the successful fulfilment of the Seven-Year Plan for the overall industrialization.

During the Seven-Year Plan the engineering industry produced and supplied over 100 sets of modern factory equipment including generators, metallurgical and chemical equipment. The engineering industry came to produce and supply electronic computers, radars, measuring apparatuses and other sophisticated precision machines and equipment on its own.

The share of the machine-building industry in gross industrial output value in 1967 rose to 31.4 per cent.

The power base, too, was further strengthened and its structure was improved.

Power output in 1970 increased 2.2 times as compared with that in 1960, that by water power stations, 1.4 times and that by thermal power stations, 37.9 times. The share of power output by thermal power stations rose from 2.2 per cent to 37.4 per cent in the same period.

All the branches of heavy industry including ferrous metallurgical, chemical, coal-mining, mining and building-materials industries made rapid progress and underwent a renewal.

As a result, in 1970 heavy industry produced 16.5 milliard kwh of electricity, 27.5 million tons of coal, 2.2 million tons of steel, 1.5 million tons of chemical fertilizers and 4 million tons of cement.

The solid base of light industry, too, was laid.

The textile industry produced over 400,000,000 metres of high-quality fabrics in 1970, whereas it produced 1,378,000 metres of fabrics a year before liberation. All the branches of light industry including food-processing and daily necessities industries were built up and domestic demands for consumer goods ranging from fabrics to goods for cultural use were mainly met with domestic production.

4) Cooperativization of Agriculture and Technological Reconstruction

Agricultural Cooperative Movement

In Korea agricultural cooperativization was carried out in earnest after the war and completed by August 1958.

When agricultural cooperation started, there was no experience and scarcity of cadres and the economic situation was difficult beyond description. Moreover, the anti-Party factionalists lurking in the Workers' Party of Korea started slandering agricultural cooperation. They said that agricultural cooperativization was "premature" under the situation in which industry had not yet been developed and modern farm machines were not available.

The Workers' Party of Korea and the Korean people were opposed to their argument.

True, the productive forces and technology were on the low level of development after the war and so far there was no instance of agricultural cooperation carried out before industrialization.

However, the Korean people were convinced that the masters of agricultural cooperation are farmers themselves according to the principles of the Juche idea and that the internal factor is decisive in the agricultural cooperative movement.

After the war the livelihood of peasants was badly deteriorated and nearly 40 per cent of them were reduced to the status of the impoverished peasants.

They were in no position to do farming without pooling their efforts and earnestly demanded agricultural cooperativization. Moreover, the restoration and development of industry required the cooperativization and rapid development of agriculture.

In addition, there were enough forces prepared to carry out agricultural cooperativization.

Under this situation there was no reason to put off agricultural cooperativization.

The provision of modern farm machines could not be the decisive factor for agricultural cooperation though it might be an objective condition.

Korea first remoulded the form of the rural economy without waiting for the realization of industrialization. Thus, a new path was opened up for agricultural cooperation in which socialist transformation preceded technical transformation.

The principle of guidance to and strategy and tactics for agricultural cooperation were set forth and implemented.

Above all, the principle of voluntariness of peasants was observed.

The method of education by demonstration proved powerful in applying voluntary principle.

The peasants who had been subjected to exploitation and oppression in the old society and engaged in small-commodity private economy through long ages were timid, very conservative and accustomed to value their experience more than talk.

Only through education by vivid demonstration was it possible to persuade and easily convince these peasants of the advantages of the cooperative economy.

Korea carried out the policy of relying firmly on the poor peasants, strengthening alliance with the middle peasants and restricting and remoulding gradually the rich peasants in consideration of the balance of forces between classes for the agricultural cooperative movement.

While observing this principle of guidance, taking into account that land was under the private ownership of peasants and that their economic conditions and levels of ideological preparedness differed from each other, Korea defined three forms of agricultural cooperatives and allowed the peasants to choose any of these forms.

The first form of agricultural cooperative was the stationary mutual-labour-aid team in which the peasants did not pool land but only did farm work jointly. This was a new development of joint labour organization such as the oxen-sharing team and labour-exchanging team which had been widely introduced in the countryside of Korea from long ago. This form served as the embryo of socialism which led our peasants to join the cooperatives.

The second form of agricultural cooperative was semi-socialist one in which land was pooled and cultivated jointly and the crop yield was distributed according to work done and to the sizes of land contributed.

The third form of agricultural cooperative was entirely socialist one in which land and other major means of production were pooled and the distribution was made entirely according to the work performed. Cooperative farms now are all of this form.

With due regard to the voluntariness of the peasants the draught cattle, farm implements and other means of production were pooled not indiscriminately but taking into account their preparedness and wishes or they were used jointly, leaving their ownership intact until the set time. When they were pooled, their prices were paid.

Correct fixing of the sizes of cooperatives was also important in guiding the agricultural cooperative movement.

In the beginning of the agricultural cooperative movement the size of the cooperative was set to comprise some 15 to 20 households in consideration of lack of experience and the low level of the cadres' qualifications for management and that of technical equipment and, gradually, as various conditions were matured, it was expanded to embrace some 40 to 100 households. Where the peasants' preparedness was at a high level and management cadres were prepared comparatively large cooperatives were organized from the beginning.

Another important problem in guiding the agricultural cooperative movement was correctly to fix the stage of its development.

The agricultural cooperative movement in Korea had three stages of development.

The first of them was the experimental stage.

In this stage specific ways and tempo of cooperation were fixed to suit the actual conditions of the country on the basis of our own experience.

In 1954 agricultural cooperatives increased the per-hectare grain output by 10-15 per cent and cash income 2-7 times as compared with private farming, while sparing 20-30 per cent of the labour power.

As a result of these advantages the number of farm households embraced in cooperatives increased to 31.8 per cent of the total of farm households by the end of 1954.

Basing itself on the success of the experimental stage the agricultural cooperative movement entered on the stage of mass-scale development.

In this stage the middle peasants began to join cooperatives in large numbers. Accordingly, suggestion was put forward as to the forms of cooperative and the ways of pooling means of production which suited the interests of the masses of the middle peasants. Measures were taken to synchronize the quantitative expansion of cooperatives with their qualitative consolidation.

As a result, the proportion of agricultural cooperatives accounted for 80.9 per cent in 1956 and 95.6 per cent in 1957.

The agricultural cooperative movement at last entered the stage of completion. Those who so far remained outside the cooperatives were the well-to-do farmers (rich and well-to-do middle farmers), farmers who did farming on the outskirts of towns, farmers dispersed in mountain regions and those in the newly liberated areas.

Great efforts were put into the technical reconstruction of agriculture to embrace the still remaining private farmers in cooperatives and the measures which took their interests into account were taken.

In Korea the agricultural cooperation was successfully completed in August 1958.

Toward the completion of agricultural cooperation the material and technical foundations of agriculture were consolidated and the qualifications of management personnel improved. Under this condition, in order to further show the advantages of the cooperative economy, it was necessary to increase the sizes of cooperatives.

Hence the agricultural cooperatives were merged by the ri unit in October 1958. 13,309 agricultural cooperatives were merged into 3,843 ones. As a result, the average size of agricultural cooperatives was expanded from 80 to 300 in the number of households and from 130 to 500 hectares in regard to the crop area.

The merger of agricultural cooperatives made it possible to make more rational use of means of production, speed up the technical revolution, improve labour organization and develop cooperative farming in a many-sided way. Cooperative farming became a more developed economy in which the unit of production and that of administration were organically merged and production, trade and credit transaction were placed under unified system of management and showed the advantages of the large-scale economy, well.

The success of agricultural cooperation resulted in the rapid development of agriculture.

The large-scale irrigation projects were undertaken with state fund and the small- and medium-scale projects were carried out by the agricultural cooperatives themselves. As a result, the rice-field under irrigation increased two times in the period of 1953 to 1958 and the share of the fully irrigated paddy fields grew from 52 per cent to 91 per cent.

In the same period the number of farm machine hire stations increased 4.7 times and that of tractors (in terms of 15 hp), 4 times, and the amount of work done by tractors, 12 times, and various advanced farming techniques were widely introduced.

With the consolidation of the material and technical foundations of agriculture grain output grew to 2,870,000 tons in 1956, 3,200,000 tons in 1957, and 3,700,000 tons in 1958.

The share of public accumulation in net income in the agricultural cooperatives were about 5 per cent in 1956, but reached about 10 per cent in 1957 and exceeded 15 per cent in 1958. The gross value of common property of the agricultural cooperatives per household increased 2.4 times on an average in 1958 as compared with that in 1955.

Share to cooperative farmers increased. Share to each household increased 1.5 times in grain, 2.6 times in potatoes and over 3.6 times in cash income in 1958 as compared with those in 1955. The poor peasants who accounted for about 40 per cent of farm households right after the war completely disappeared and the living standards of the peasants as a whole rose to those of the middle peasants and more in four or five years.

The Technical Reconstruction and Development of Agriculture

The technical reconstruction was pushed ahead without delay following the transformation of the rural economy.

Basing himself on the analysis of the specific features of agricultural production in Korea, the physiographical features and the level of industrial development, President Kim Il Sung set irrigation, electrification, mechanization and chemicalization as the basic contents of the rural technical revolution and carried them out successively as an integral whole.

Irrigation was the first priority of the rural technical revolution.

This related to the specific features of agricultural production in Korea.

In Korea rice farming holds a big proportion. It suffers from droughts in April and May when rice seedlings are transplanted and from spells of rains in July and August when rice blooms and puts forth the ear. Therefore it is essential for rice farming to harness water to prevent the damage of droughts and floods. In this sense rice farming can be said to be water farming.

In irrigation, main stress was put on irrigation projects and conservation of rivers and forests.

In the irrigation projects priority was given to rice-field irrigation and then non-paddy fields were brought under irrigation. Works on irrigation and drainage of stagnant water in spells of rains were carried out.

As a result of unremitting efforts spent on irrigation 377,000 hectares of fields were brought under irrigation by the first half of the year 1959 and the total area under irrigation increased seven times the pre-liberation figure.

During the Seven-Year Plan irrigation projects were carried out to complete rice-field irrigation and water considerable part of non-paddy fields, while making effective use of the existing irrigation facilities. As a result, the task of irrigation was fulfilled.

The electrification of the rural areas was rapidly promoted. During the Five-Year Plan and the Seven-Year Plan electricity arrived in all the villages and farmhouses.

In 1969 the consumption of electrical power in the countryside amounted to over one milliard kwh and most of it was used for production. As a result, electrification of the rural economy was completed.

With the realization of industrialization, mechanization and wide use of chemicals in the rural economy were successfully promoted.

Agricultural production rapidly increased owing to the advantages of cooperative economy and the success of technical revolution.

Grain output amounted to 3,803,000 tons in 1960.

During the Seven-Year Plan grain output steadily grew.

Grain output amounted to 4,830,000 tons in 1961 and in 1967 it increased by 16 per cent as compared with that in the previous year in spite of flood damages and 2.7 times the pre-liberation figure. In 1968 it grew by 11 per cent in comparison with the previous year's figure.

Stockbreeding has made big strides on the basis of modern technology. A new development has been made in poultry farming and every year over seven hundred million eggs and a great quantity of chicken are produced by industrial method.

5) Conversion of Korea into a Socialist Industrial Power

While Korea became an industrial-agricultural state by laying the foundation for industrialization between 1957 and 1960, between 1961 and 1970 it turned into an industrial power as a result of the complete realization of industrialization.

As industry developed rapidly and grew in proportions during the Seven-Year Plan, the role of industry in the gross social production and the national income became more predominant. The proportion of industry in the gross industrial and agricultural output rose to 74 per cent in 1969 as against 34 per cent in 1956. In the same period the share of industry in the national income accruing from industry and agriculture increased from 25 per cent to 65.

With the development of industry, the per capita output of major industrial products showed a great increase and in 1969 it was 1,184 kwh in electric power, 1,975 kg in coal, 158 kg in steel, 108 kg in chemical fertilizer and 287 kg in cement.

The railway switchover to electric traction was pushed forward on a large scale. In the period of the Seven-Year Plan, 850 kilometres of railways was electrified and thus the electrification of major trunk lines was finished in the main.

Foreign trade expanded due to the successes in industrialization and a change came about in the composition of imports and exports. The proportion of machinery in exports was 18 times greater in 1966 than that in 1956 and that of various ores dropped to one-ninth in the same period.

A large number of technical personnel were trained and the tasks of industrialization and technical reconstruction were carried out by our own technical personnel.

In the Seven-Year Plan period the number of universities and colleges increased from 78 to 129 and 376 higher technical schools were established. In 1970 the technicians and specialists in various economic fields were over 497,000 or 4.3 times as many as in 1960, and the proportion of technicians and specialists in the total number of employees in all economic spheres except agriculture went up from 7.2 per cent in 1960 to 15.8 per cent in 1969.

Thus, in 1970 Korea, once a colonial agrarian country lagging far behind modern civilization, was converted into a socialist industrial power with independent modern industry and developed agriculture.

3. FOR THE JUCHE-ORIENTATION, MODERNIZATION AND SCIENTIFIC REMODELLING OF THE NATIONAL ECONOMY

1) Consolidation and Development of the Successes in Industrialization and Three Objectives of the Technical Revolution

With the realization of industrialization and the technical reconstruction of the economy in Korea, modern industries including heavy industry were created and their independent system established. And all economic sectors were placed generally on a modern technological footing.

But many things were yet to be done in the sphere of the economy. It was imperative to adjust industry better, strengthen its independence and give fuller play to the already created great potentialities of industry and bring about new technical progress in all domains of the economy.

This was why the Six-Year Plan (1971-1976) was carried out in the 1970s.

The basic task of the Six-Year Plan was to cement the material and technical foundations of socialism and free the working people from heavy labour in all fields of the national economy by consolidating and developing the successes gained in industrialization and advancing the technical revolution to a new, higher stage.

A number of measures were taken to carry out the task.

Above all, measures were taken to improve the inner structure of industry and further strengthen its Juche character.

Attention was paid to continuing the work of rounding out the industrial branches, reinforcing weak sections and creating new branches so as to consolidate industry and, at the same time, developing industry by drawing on the domestic raw materials.

On the other hand efforts were expended to make agriculture highly intensive.

For technical development the three major tasks of the technical revolution were set forth.

The great leader Comrade Kim Il Sung said in his report to the Fifth Congress of the Workers' Party of Korea on the work of its Central Committee:

"We have to launch a widespread technical innovation movement in industry and agriculture and all other branches of the national economy so that we shall considerably narrow the distinctions between heavy and light labour, and between agricultural and industrial work and free women from the heavy burden of household chores. These are the three major tasks of the technical revolution which we should aim to fulfil in the next few years."

In carrying out the three objectives of the technical revolutions, great efforts were made, in the first place, to narrow the gap between heavy and light labour, to eliminate heat-affected and other harmful work and to introduce semi- or full-scale automation in all fields of the national economy.

In connection with the three major tasks of the technical revolution, much attention was devoted to carrying out the rural technical revolution. Now that irrigation and farm electrification had been realized, the mechanization of farming and application of chemicals were vigorously pushed forward.

In order to free women from the heavy burden of household chores which represented one of the three major tasks of the technical revolution, innovations were made in the food industry and work was done to manufacture and supply large quantities of various functional kitchen utensils.

The tasks of consolidating and developing the successes gained in industrialization and advancing the technical revolution to a new, higher stage were successfully carried out. In particular, the success gained in achieving the three objectives of the technical revolution provided new prospects for the development of the economy, as a whole.

Through the three technical revolutions, above all, modern technical means increased and the technical skills of the working people who handle them were improved.

At the same time, the distinctions between heavy and light labour and between agricultural and industrial labour were narrowed down considerably, and as the working people were freed from the need to do arduous labour, their Chajusong and creativity rose and their attitude as masters and enthusiasm increased greatly.

In addition, due to the achievements of the three technical revolutions the economic independence and material and technical foundations of the country were consolidated and the possibility and potentialities of economic development increased. Above all, arduous and labour-consuming processes were replaced by new technical processes in the mining, metal and building-materials industries, agriculture, construction and transport. As a result, production capacity and labour productivity rose and the norm of consumption of raw and other materials, fuel, and power per unit of output dropped.

This technical remodelling of major economic branches made it possible to fix more rationally the balance of production capacity between the principal economic fields.

Further, the successes in the three technical revolutions provided a new possibility of creating productive labour sources. Because they were freed from the heavy burden of household chores, the working women came to enjoy more favourable working condition.

These achievements resulted in fresh progress in industry, agriculture, construction, transport and all other economic fields.

2) Juche-Orientation, Modernization and Scientific Remodelling of the National Economy

Although the system of the independent national economy was established in 1970, this did not mean the completion of the building of an independent national economy. The economic construction of socialism had to continue and it needed to be propelled along the line of building and developing a more powerful independent national economy. This was why the task of making the national economy Juche-oriented, modern and scientifically-motivated was set out to push forward the building of a socialist independent national economy on a new higher plane after carrying out the Six-Year Plan for consolidating and developing the achievements of industrialization after 1970.

To make the national economy Juche-oriented means constructing and developing an economy suited to the real conditions of one's country with the domestic natural resources and technical know-how.

For the Juche-orientation of the national economy, efforts were directed, first of all, to solving the problems of raw materials, fuel and power more adequately with the domestic resources. It was set as an important task for the Juche-orientation of the economy to improve the structure of the economy in keeping with the development of the economy, science and technology.

To modernize the national economy means replacing backward techniques with advanced ones and improving the technical equipment of the economy. The target of modernization of the national economy is the introduction of comprehensive mechanization and automation in production, and the modernization of the national economy means precisely the modernization of technical means. This is why stress was put on the engineering industry to make machinery and equipment precise, large-sized, high-speed and automatic and measures were taken to devise and manufacture various modern machinery and equipment. And attention was paid to the development of the electronics and automation industries.

Special attention was directed to modernizing the economy from a firm Juche stance and in conformity with the real conditions of the country.

Steps were taken to raise the general level of technical equipment of the economy by degrees while modernizing one by one the technically backward sectors and things easy to modernize with a small outlay of money by making effective use of the conditions and possibilities already created. Further, the modernization of the economy was pushed forward on a mass basis on the principle of self-reliance in opposition to flunkeyism, technological mystification and other wrong ideological trends.

To remodel the national economy along scientific lines means developing science and technology to put production and managing activities in all economic branches on a new scientific basis. In order to scientifically remodel the national economy, measures were taken to solve various urgent technological problems arising in strengthening the independence and Juche character of industry, introducing mechanization, automation and remote control in production and in improving production and technical processes and production methods by developing technology and engineering.

All sectors of agricultural production were put on a new scientific basis by strengthening scientific researches on agriculture.

In particular, measures were taken to strengthen the researches in the basic sciences, pioneer new areas of science and study with a long sight the possibility of widely introducing the latest achievements of science and technology.

This led the economy of Korea to develop rapidly on a new basis.

3) Economic Growth in the 1970s

Industrial Development

Between 1970 and 1979 industrial production grew at an annual rate of 15.9 per cent on an average. In the same period, the total industrial output value increased 3.8 times, of which the production of means of production grew 3.9 times and the production of consumer goods 3.7 times.

In the Six-Year Plan period (1971-1976) total industrial output showed a 2.5-fold increase and the average annual rate of growth of industrial production reached 16.3 per cent. The plan was fulfilled a year and four months ahead of schedule in total industrial output value.

In the Second Seven-Year Plan period, too, industrial production continued to grow rapidly. Compared with the previous year, it increased to 117 per cent in 1978, 115 per cent in 1979 and 117 per cent in 1980.

The growth of industry shows itself, first of all, in the qualitative consolidation and expansion of the power bases. In particular, many thermal power stations were constructed.

As a result, the Six-Year Plan's goal of electric power production, namely 28 milliard kwh, was reached a year ahead of schedule. Compared with the previous year, electric power production increased to 110 per cent in 1978 and 114 per cent in 1979.

The mining industries including coal and ore mining developed and the goal of 50 million tons of coal production under the Six-Year Plan was attained a year and four months ahead of schedule.

Ferrous metallurgical bases were readjusted and expanded and the independence of the metal industry strengthened. In 1976 the capacity of steel production reached four million tons. In comparison with 1977, steel production rose to 127 per cent in

1978, and rolled-steel output increased to 115 per cent in 1979 as against 1978.

In compliance with the requirements of the technical revolution, the engineering industry developed and its level went up. In particular, the production of machine tools increased rapidly.

The bases for the production of large-size machines and sets of plants made to order were built up and new types of machines and equipment produced. In the Six-Year Plan period the engineering industry came to produce 5,000-metre boring machines, 300-hp bulldozers, 10-cubic-metre excavators, 50,000-kva generators and medium or high-speed engines of 2,500 hp and 3,000 hp.

In the same period, shipbuilding grew more than four times and ships of 20,000-ton class were launched.

The chemical industry made progress and its structure was further rounded out. The goal of producing three million tons of chemical fertilizers under the Six-Year Plan was reached a year ahead of time. The chemical fibre and plastics producing centres were adjusted and reinforced, so that the production capacity of vinalon and vinyl chloride increased to 50,000 tons respectively.

In the eastern and western parts of the country oil refineries were built and large modern bases of the chemical fibre industry created. Compared with the previous year the production of chemical fertilizers went up to 123 per cent in 1978 and to 113 per cent in 1979. The bases for producing chemical fertilizers were consolidated.

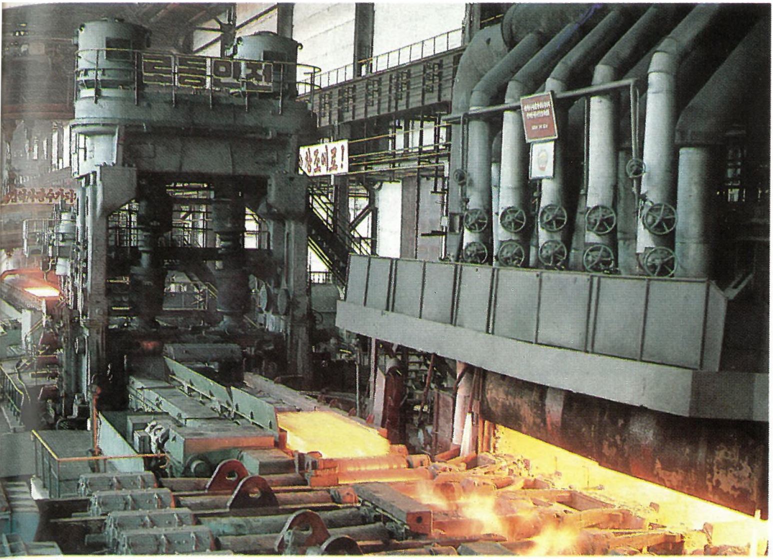
Light industry made progress and its material and technical foundations were further strengthened.

The indices of the Six-Year Plan with regard to the production of fabrics and other major consumption goods were attained a year and a half ahead of schedule.

Development of Agriculture

The 1970s witnessed marked progress in Korea's agriculture.

Above all, grain production increased remarkably. Owing to



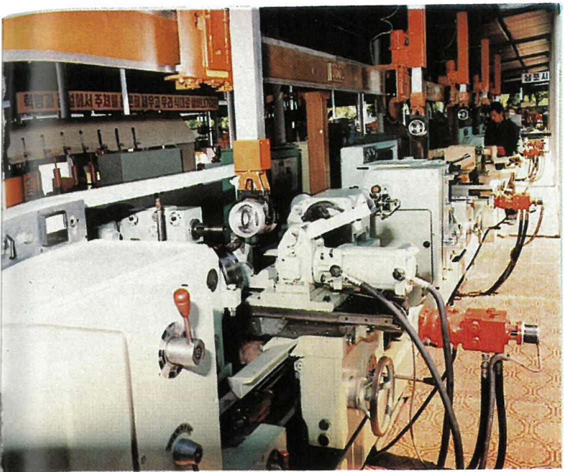
Rolling shop of the Kim Chaek Iron and Steel Complex

Coal-cutting machine and hydraulic props produced at the Pyongyang Coal Mining Machine Plant

A view of the Pyongyang Thermal Power Complex

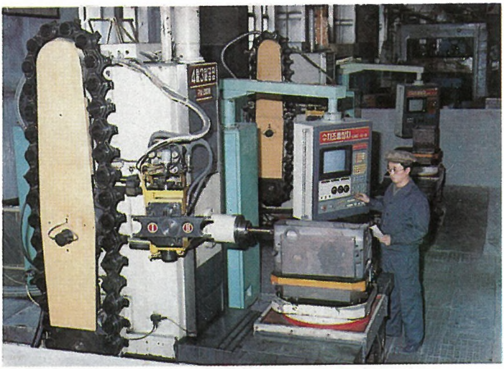
Hambuk Shipbuilding Complex by night

An inside view of the Kim Jong Tae Electric Locomotive Complex

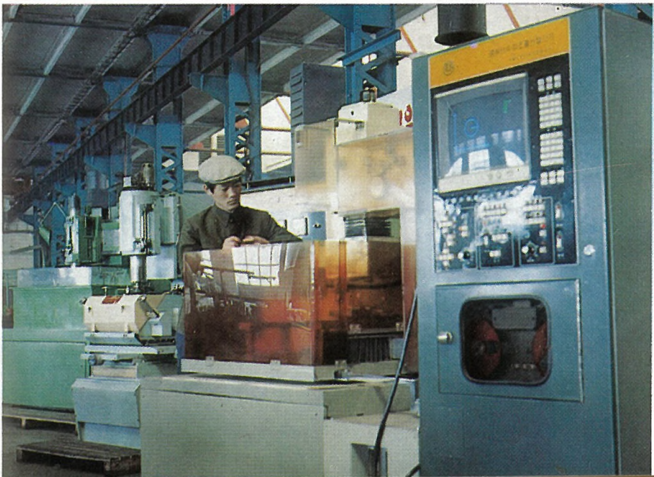


The flexible manufacturing system for the processing of various rolling stock pistons (February 26 Factory)

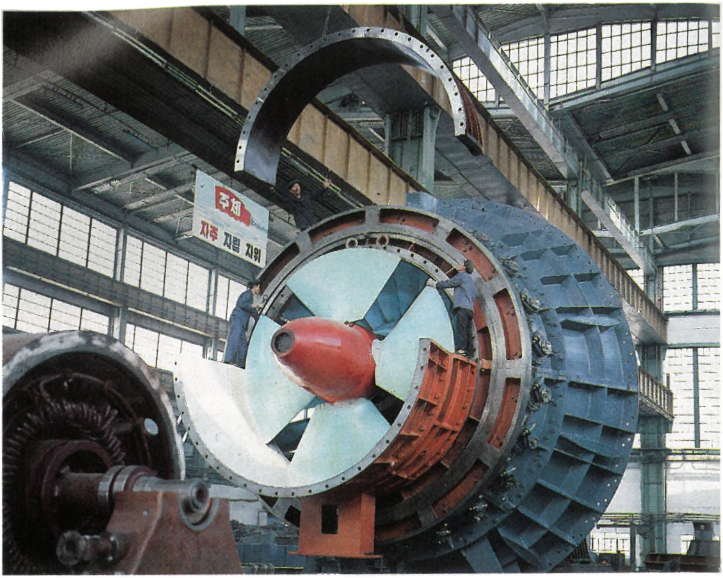
A numerically-controlled lathe (April 3 Factory)



A numerically-controlled cutter (October 5 General Automation Works)



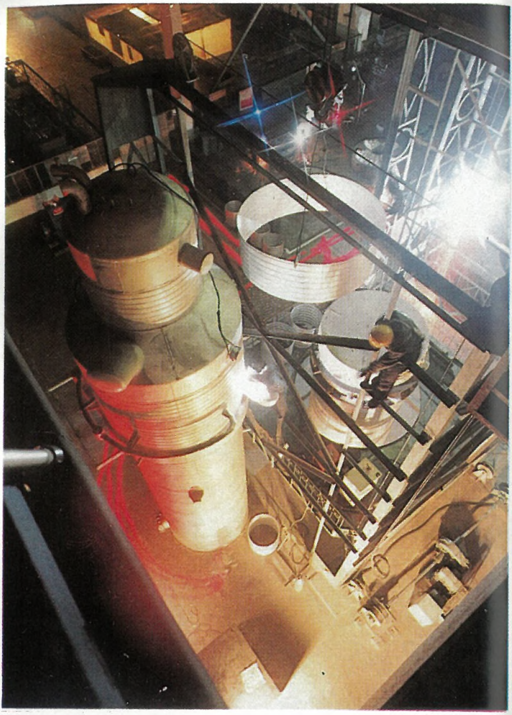
Workers of the Taean Heavy Machine Complex assembling a generator



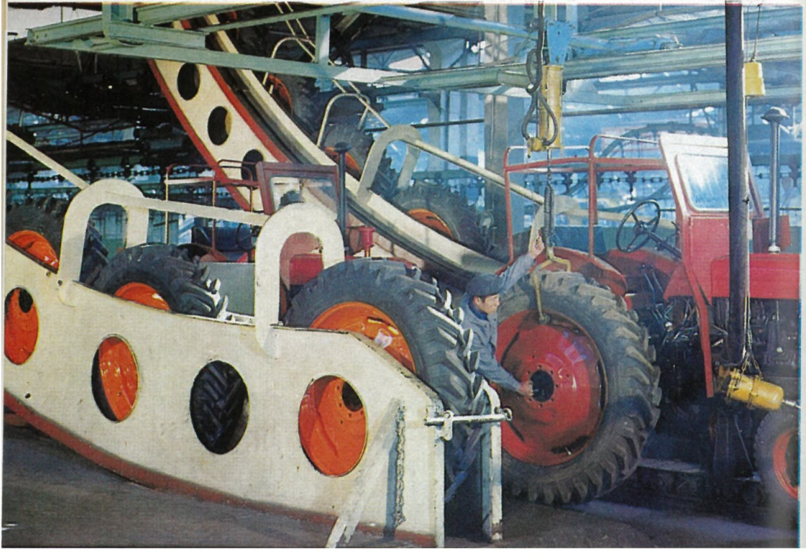
Equipments are produced to order at the Taean Heavy Machine Complex

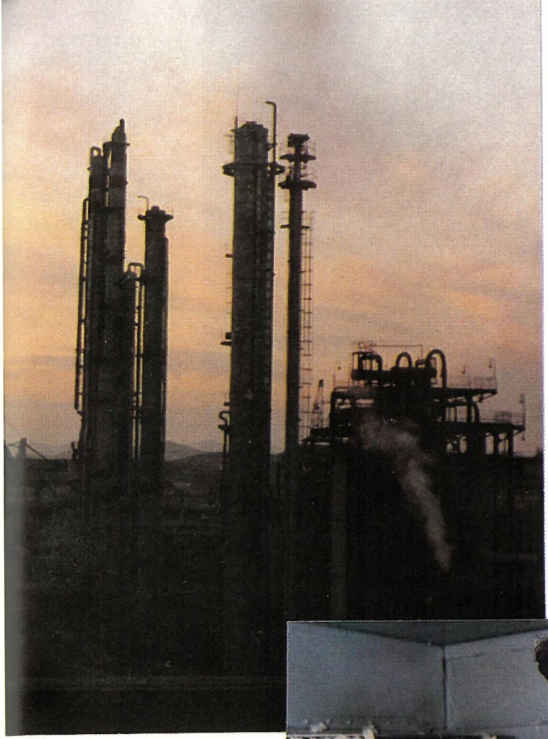
The great leader President Kim Il Sung and the dear Comrade Kim Jong Il inspecting newly-made machines

6,000-m³ oxygen separators are manufactured at the Ragwon Machine Complex



The production of tractors increases at the Kum Song General Tractor Plant



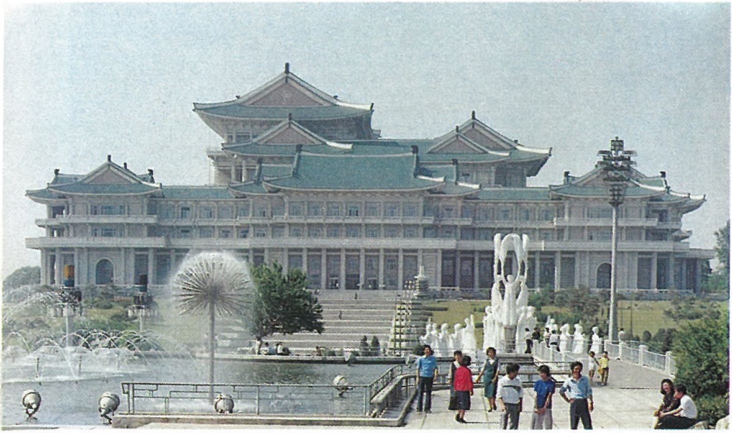


Views of the methanol synthesis tower and the projecting shop of the Sunchon Vinalon Complex

The building of inner farming facilities is stepped up on the Yomju plain reclaimed from tideland

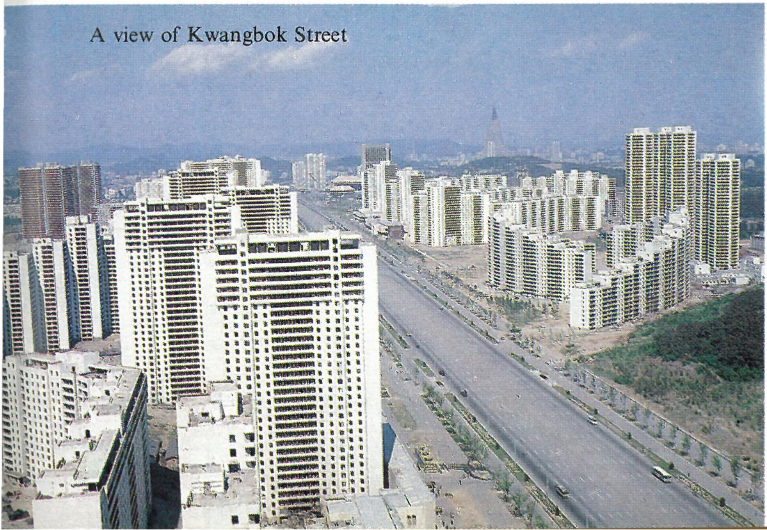
An irrigation channel bringing life-giving water to the reclaimed tideland plain

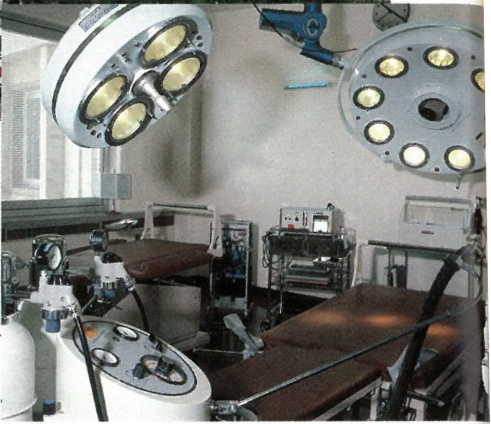
Rice harvest on the reclaimed tideland plain



Grand People's Study House

A view of Kwangbok Street

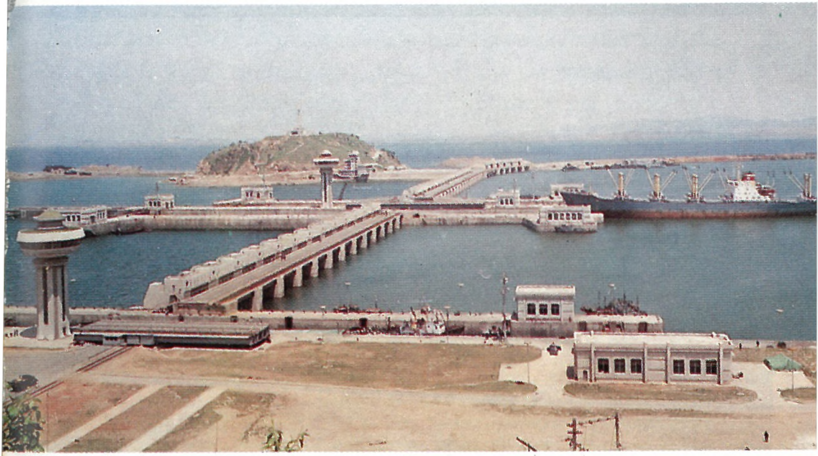




Pyongyang Maternity Hospital

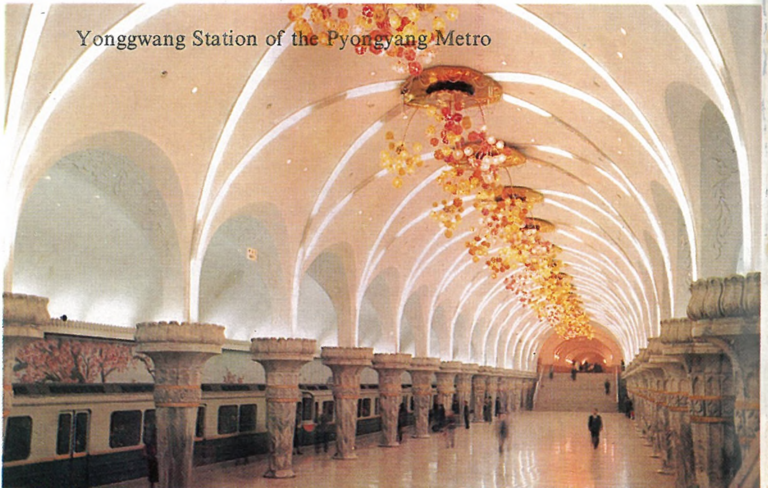
Pyongyang Underground Store

Ryugyong Hotel under construction



West Sea Barrage

May Day Stadium



Yonggwang Station of the Pyongyang Metro the continued abnormal weather, natural and climatic conditions were unfavourable. Nevertheless, in 1974 seven million tons of grain was produced. As a result, the Six-Year Plan index for grain production was attained two years ahead of time. Grain production showed a systematic increase: more than eight million tons in 1976, 8.5 million tons in 1977 and nine million tons in 1979.

Agricultural production became highly intensive and was put on a scientific basis. In the 1970s many new reservoirs were constructed and the area under irrigation was extended. In particular, the dry-field irrigation system was established. So, our farming has been placed under an all-round irrigation system.

The introduction of chemicals in agriculture was pushed ahead swiftly. As the production of chemical fertilizers grew, the amount of chemical fertilizers applied to each hectare increased from 1 ton to 1.5 between 1975 and 1979.

With the promotion of farm mechanization, the level of mechanization in agricultural labour and the proportion of mechanized agricultural production rose higher.

In 1979 the number of tractors per 100 hectares of farmland reached seven in the plain area, and six in the intermediate and mountainous areas respectively.

The advanced methods of farming and the latest achievements of science were widely introduced in agricultural production. The principle of planting the right crop on the right soil at the right time was observed in agriculture and the requirements of the Juche methods of farming in regard to the raising and bedding out of rice seedlings, the number of clusters per *pyong,* the number of plants per cluster, the application of humus soil and chemical fertilizers and humidity soil and water control were correctly fulfilled.

Along with grain production, stock farming, vegetable growing, fruit culture and production of industrial crops developed simultaneously.

Growth of National Income, Betterment of People's Livelihood

As a result of the successful realization of the three objectives of the technical revolution, labour productivity grew rapidly and its level was elevated markedly. The amount of the national income in kind increased greatly and the material foundation for improving the people's material and cultural standards was strengthened.

In Korea the national income per head of the population was more than 1,000 dollars in 1974 and 1,920 dollars in 1979, that is, nearly two-fold increase in five years.

The pay of factory and office workers rose systematically while the prices of consumption goods fell.

In the latter half of 1970 the pay of all the workers, engineers and office employees rose by 31.5 per cent on an average. This was followed by a 10-24 per cent rise in the pay of the factory and office workers of the low-paid category in the mining, machine-building and building-materials industries and transport and many other economic fields.

As the economic foundation of cooperative farms was strengthened and agricultural production increased, the per-household income of farmers went up.

In the 1970s, measures were taken to cut the prices of industrial goods on many occasions. Especially, in 1974 the prices of over 21,800 kinds of industrial goods, including fabrics, knitted goods, footwear and daily necessities were reduced by 30 per cent or 50 per cent at the most.

In addition to the monetary income, the additional benefits given by the state to the working people increased. As a result, in the Six-Year Plan period alone, the per-household real income of the factory and office workers jumped up 1.7 times and that of the farmers 1.8 times. Among other things, all taxes were completely abolished in 1974. Korea became a tax-free country, and the Korean people, a tax-free people.

In the 1970s a great number of dwelling houses were constructed for the working people at the state expense.

In the Six-Year Plan period alone, the high-rise apartment houses for 414,000 families were built in urban communities and modern dwelling houses for 472,000 families in the countryside. Large numbers of modern creches and kindergartens were constructed and the existing ones improved better. And the material conditions of education were improved generally.

In the 1970s the work of covering the whole country with a TV grid was successfully realized.

Another important success scored in improving the people's livelihood was the marked reduction of the distinctions between the urban and rural dwellers in their living standards and conditions.

The income of the farmers rose in general. In particular, the income of farmers in the mountainous areas increased faster and the difference between regions in the income of the farmers was almost eliminated. The gap between agricultural and industrial labour was markedly lessened and the farmers were greatly relieved from heavy labour.

The work of introducing water supply and bus service in the farm villages was completed. This made it possible to lighten the rural women's burden of household chores, provide fine cultural and sanitary conditions for the farmers, further strengthen the ties between town and country and ensure greater conveniences in the life of farmers.

4) Economic Growth by the First Half of the 1980s

Outcome of the Second Seven-Year Plan

The central task of industry during the Second Seven-Year Plan was to make the best of its existing foundations and, by expanding them, to strengthen the Juche character of industry and further modernize and introduce a scientific breakthrough in all sectors of industry.

As for the major industrial indices under the plan, at the end of the Second Seven-Year Plan (1984) we were to turn out annually 56,000-60,000 million kwh of electricity, 70-80 million tons of coal, 7.4-8 million tons of steel, a million tons of nonferrous metals, 5 million tons of engineering products, 5 million tons of chemical fertilizers, 12-13 million tons of cement and 3.5 million tons of marine products.

In the 1980s, too, industry made rapid progress. Between 1978 and 1984 total industrial output value increased 2.2 times—2.2 times in the production of means of production and 2.1 times in consumer goods. In this period the rate of average annual increase in industrial production was 12.2 per cent.

The major targets of industrial production set under the plan were reached with success.

In 1984, compared with 1977, electric power increased by 78 per cent, coal 50 per cent, steel 85 per cent, machine tools 67 per cent, tractors 50 per cent, lorries 20 per cent, chemical fertilizers 56 per cent, cement 78 per cent, fabrics 45 per cent and marine products 2.2 times.

During the period industrial construction was carried out on a gigantic scale, so that heavy and light industrial bases were strengthened on an expansion basis.

During the period 17,785 modern factories and workshops were built and put into operation.

Industry was firmly based on the domestic resources and its structure attained perfection. This further strengthened the independent and Juche character of industry.

In this period hydroelectric and thermal power generating capacities doubled. As a result, the power bases were expanded and further consolidated in quality.

With the mining industry making rapid progress, the raw material and fuel bases of industry were expanded and strengthened and new success achieved in ensuring the Juche character of the metal industry.

The process of iron production with domestic fuel was investigated and perfected, the Juche-orientated iron-production centres built at iron and steel works, metallurgical furnaces reconstructed, and rolling and second-stage metal processing centres expanded.

In the period the production processes of the February 8 Vinalon Complex and the Chongjin and Sinuiju Chemical Fibre Mills were reinforced and the production of various chemical fibres, synthetic resins and basic chemical products with domestic raw materials increased.

Rapid progress was made in the engineering industry and great technical advance achieved in industry. In this period the engineering industry increased 2.3 times. In particular, the bases for the production of large-sized machines, equipment made to order, mining and transport equipments, electronic instruments and automation elements were expanded.

Based on the development of the engineering industry, overall mechanization, automation and remote control were introduced on a wide scale in the mining, metal, chemical and all other industries.

In addition, over 69,000 valuable proposals for technical innovation including a new casting process, carbide production process and high-speed spinning processes were introduced in production every year.

During the Second Seven-Year Plan agriculture made fresh progress. In 1984 ten million tons of grain were produced. Rapid headway was made in all sectors of agriculture. As the assistance of industry to agriculture was strengthened and the technical revolution promoted in the countryside, the material and technical foundations of agriculture were further consolidated.

In the period more than 200 reservoirs, over 3,000 pumping stations and a great many facilities for drawing underground water were newly built and, as a result, the irrigated area increased 1.4 times.

Comprehensive farm mechanization and chemicalization made great headway.

In 1984 the number of tractors in the service of agriculture was 1.5 times greater than in 1977, lorries 1.3 times, weeding machines 2 times, rice transplanters 1.5 times, and harvesters 6.3 times.

In the same period the supply of chemical fertilizers to agriculture increased 1.6 times and that of various agricultural chemicals 2 times.

Successes were also achieved in transport.

In the plan period railway freight turnover went up 1.8 times and the material and technical foundations of railway transport were further strengthened.

With the continued railway switchover to electric traction, haulage by electric locomotives rose from 67 per cent to 88.3 per cent in the plan period.

In the same period the volume of motor transport increased 2.2 times, cargo shipping 2.8 times and overseas goods transport 5.1 times. In addition, the transport systems by cableways, belt-conveyors and pipelines were introduced widely in various fields of the economy and their volume of transport increased 2 times.

During the Second Seven-Year Plan the task of improving the people's livelihood was also carried out with success.

In 1984 the national income was 1.8 times greater than in 1977.

Measures to improve the working people's livelihood were taken on many occasions. In the plan period all the children and pupils and students in the country were issued gratuitously with clothes, footwear, various school things and foodstuffs on three occasions.

Through these and many other measures the working people across the country received an additional benefit of 2,940 million *won* in total or an average of 800 *won* per family.

During the period the real income of factory and office workers increased 1.6 times, that of farmers 1.4 times and their livelihood improved evenly.

As a result of growing purchasing power of the working people in town and country the retail turnover went up 1.9 times during the plan period.

The material foundation of education was further strengthened. At the end of 1984, the number of universities and colleges reached 216 and 576 respectively and that of technicians and specialists was 1,250,000.

In public health service over 290 preventive and therapeutic establishments were newly built and the number of doctors increased 1.4 times and hospital beds to 106 per cent.

With the improvement of the working people's livelihood and the development of health service, the average life span of the people reached 74 years, that is, 36 years longer than before liberation.

5) Features of Today's Economy

Independent Structure of the Economy

Korea has a versatilely and comprehensively developed structure.

In Korea the economic branches have been built and developed on the principle of producing on its own what is needed in large quantities or of cardinal importance for the development of the country's economy and the welfare of the people and of purchasing what is in small demand or of secondary importance through foreign trade. It was also built and developed to ensure the cycle of extended reproduction within the bounds of the country. As a result, the economy has a many-sidedly developed and comprehensive structure and a system capable of standing on its own legs. This is a specific feature of our economy distinguished from the economy dependent on other countries for raw materials, fuel, power and provisions or the economy geared exclusively to exportation in which reproduction is carried on to meet the demands of overseas markets.

Korea's heavy industry is developed many-sidedly. It has the engineering, metallurgical, chemical, building-materials and mining industries and its branches are developed in many-sided way. Further, it has such a structure that it can exploit domestic raw materials, fuel and power and develop by using them.

Korea's heavy industry has been further strengthened in its technical independence because it developed its own techniques to exploit and use domestic resources and drew on them. In 1975 the proportion of self-sufficiency in raw materials exceeded 75 per cent.

Light industry has also achieved many-sided development. Since it comprises the textile, food and daily necessities industries, it satisfies the domestic demands for light industrial goods with its own products.

The characteristics of the structure and system of light industry in Korea lie in the fact that it is made up of large-scale central industry and small- and medium-scale local industry. While central industry mainly copes with the demands of nationwide importance, local industry serves the end of meeting of local demands by harnessing the local raw materials resources.

Many of consumer goods can be turned out with relatively simple techniques and the raw materials needed for the production of consumer goods are found widely in the local areas. Taking this fact into account, large-scale central light industry and small- and medium-scale local industry are developed in parallel to make an effective use of domestic resources while spending less state funds and rationally satisfy the people's demands for consumer goods. This has brought about the rapid development of light industry and made it possible for light industry to acquire a rational structure and system commensurate with its economic and technical features. This has also brought about an improvement in the geographical distribution of the industrial productive forces by spreading industries evenly throughout the country.

Each county in Korea has 20 local industrial factories on an average and they play a great part in satisfying the local demands for consumer goods. Moreover, these factories are a major source of the local budgetary incomes.

Agriculture, too, developed many-sidedly.

Putting the main stress on the production of grain, Korea developed all other branches of farm production such as fruit growing, vegetable culture, sericulture and stock raising. As a result, the country's demands for farm products are well satisfied.

Production Level

In 1984 the per capita output of principal industrial products was: 2,850 kwh of electricity, 4,276 kilogrammes of coal, 373 kilogrammes of steel, 289 kilogrammes of chemical fertilizers, 690 kilogrammes of cement, 44.4 metres of fabrics and 194 kilogrammes of marine products.

The machine-building industry, the keystone of heavy industry, is turning out complete sets of equipment for modern factories including various large and precision machines and plants for power stations. It has produced 200,000-kva transformers, 2,500-hp diesel engines, 18-metre turning lathes, 20-metre lathes, 40,000-cubic-metre gas compressors, 6,000-cubic-metre oxygen separators and 10,000-ton presses.

The machine-building industry and all other branches of heavy industry have developed onto a high level, and so, on this basis, construction work is carried on on a gigantic scale everywhere in the country.

The West Sea Barrage was completed in five years and put into commission in June 1986. The barrage which was built across the 8-kilometre rough sea has three locks for the passage of 50,000-ton, 20,000-ton and 2,000-ton ships and an overflow dam and a revolving bridge scores of metres long.

The total amount of removed earth in this project was as much as 15 million cubic metres. The funds invested in it amounted to 4 billion *won*.

This gigantic construction project was completed with our own designs, techniques, materials and funds.

In the capital city of Pyongyang a super-high building has risen which can be seen from anywhere in the city. It is the 105-storey Ryugyong Hotel which is 323 metres high. The hotel has a total floor space of over 400,000 square metres. It contains thousands of rooms, excepting large meeting halls, banquet halls, amusement rooms and a hospital which occupies 30 per cent of its total floor space. A new-born baby will be a 21-year-old youth if he goes up from the first floor to the last staying a day in each room on every floor.

The framework of this towering mammoth building was successfully completed in a year by the end of May 1989, by our own efforts and with our own techniques, materials and equipments.

In addition, on October 10, 1989, the first-stage project of the Sunchon Vinalon Complex was completed and put into operation in honour of the 44th anniversary of the founding of the Workers' Party of Korea. Vinalon was invented by Dr. Li Sung Gi of Korea and the vinalon industry is a model of the Juche-oriented industry which has been developed by our own techniques and efforts and with limestone and anthracite abundant in Korea. The research on the question of industrial production of vinalon was completed during the Fatherland Liberation War and the February 8 Vinalon Complex was erected and put into operation in 1960. (At first, its production capacity was 20,000 tons, but later, it rose to 50,000 tons.) After that, the carbide-producing process by the oxygen-blowing method was investigated by a research group and introduced in the Sunchon Vinalon Complex. In the future, the complex will produce 100,000 tons of vinalon, a million tons of carbide, 750,000 tons of methanol, 900,000 tons of nitrogenous fertilizers, 250,000 tons of vinyl chloride, 250,000 tons of caustic soda, and 400,000 tons of carbonate of soda. The industry of producing dacron, orlon, polyethylene and various other chemical products with methanol will be developed.

In Korea industry and all other economic branches are managed and run by its own technical personnel.

The number of technicians and specialists in all the economic sectors reached 1,200,000 in 1982 and the proportion of manual workers to technicians and specialists was seven to one in the same year. Later, the technicians and specialists increased to 1,460,000 and the number of universities reached 266 in 1988 and 270 in 1989.

With the development of industry, the ratio of industry to agriculture changed. Industry accounted for 80 per cent of the total industrial and agricultural production in 1986.

Agriculture also attained a high level.

In Korea arable land is limited. Mountains hold 84 per cent of the territory, and the total area of cultivated land is 2 million hectares including 300,000 hectares of orchards and 200,000 hectares of sloping fields. The safe crop area is only 1.5 million hectares—700,000 hectares of paddies and 800,000 hectares of dry fields.

Korea's agricultural production is done by state and cooperative farms.

As for the level of farm mechanization, the number of tractors per 100 hectares of land under cultivation will increase to 10 or 12 generally in the near future. All farm operations—rice transplanting, pulling out of young rice plants, ploughing, thrashing and transport—are done with machines. A farmer tends 2-2.5 hectares of paddy field and 2-4 hectares of dry field. On the Taehongdan General Farm situated in the north of the country a farmer copes with 30 hectares. In the near future a farmer will tend over 5-6 hectares of paddies and 8-10 hectares of dry fields on an average.

Agricultural production increased rapidly. Already in 1984 grain output reached 10 million tons. Progress was made in other branches of agricultural production, too.

The national income increased as industry and agriculture made progress. Per-capita national income reached 2,400 dollars in 1986.

Foreign trade developed rapidly. Total exports in 1984 were 74 times greater than in 1946. In 1985 the total volume of foreign trade amounted to 11,680 million dollars (the total amount of exports was 6,060 million dollars and that of imports 5,620 million dollars).

As is to be seen from this, Korea's economy continues to develop at a high tempo, producing and supplying adequately heavy and light industrial goods and agricultural produce needed for the building of socialism and improvement of people's living standards.

4. PROSPECTS OF ECONOMIC DEVELOPMENT

1) The Regulation Period

Based on the successes scored in carrying out the Second Seven-Year Plan, a regulation period was set for the years 1985 and 1986. It aimed at regulating the economic development in part and making full preparations for the successful achievement of higher objects in economic construction.

Giving priority to the fuel and power industries and railway transport, great stress was put, first of all, on developing the ferrous metal industry.

Great efforts were also directed to the laying of the foundations for further promoting the technical revolution. In particular, the let-each-machine-tool-make-more movement was launched once more by tapping potentialities and reserves in all economic spheres and the work of turning out 10,000-ton presses pushed forward in the engineering industry.

The most important thing in making preparations for the carrying out of the new long-term plan was to promote rapidly the major construction projects. In this period efforts were concentrated on the reclamation of 300,000 hectares of tideland and the construction of the West Sea Barrage, Taechon Power Station, Sunchon Vinalon Complex, railways in the northern region and other large-scale projects.

2) The Third Seven-Year Plan

The Basic Task of the Third Seven-Year Plan

The Third Seven-Year Plan (1987-1993) started from 1987.

The basic task of this plan was to continue to push ahead with the Juche-orientation and modernization of the national economy and introduction of science in it, laying the solid material and technical foundations for the complete victory of socialism.

In this plan period the Juche-orientation, modernization and scientization of the national economy will be further promoted to round out the economic structure, radically raise the level of its technical equipment and place all production activities on the basis of modern science in keeping with the demands of the building of an independent national economy. Thus, the material and technical foundations of socialism will be further consolidated to satisfy the growing material demands of the country and the people.

During the period industrial output will grow at an average annual rate of 10 per cent and increase 1.9 times, of which the production of means of production will grow 1.9 times and consumer goods 1.8 times.

Agricultural production will also increase more than 1.4 times.

As a result, the gross social production will grow 1.8 times and the national income 1.7 times in this period.

While increasing accumulation quickly, the real income of the factory and office workers will rise 1.6 times and that of farmers 1.7 times.

Development of Key Industries and Transportation

During the Third Seven-Year Plan great efforts will be made to develop the key industries.

The long-term plan envisages the rapid development of the power industry through reliance on the domestic power resources, and faster growth of power production than other branches of industry, so that it will produce 100,000 million kwh of electricity annually.

In this period the construction of the Taechon Hydro-power Station which is nearing completion will be finished without delay, Huichon, Namgang, Kumyagang, Orangchon and other large hydro-power stations will be built, sluice power stations constructed at many points of big rivers and a large number of small and medium power stations erected in local areas. Thus, more than 4 million kilowatts of hydro-power generating capacity will be created.

In addition, more thermal power plants and a large atomic power station will be built. It is also envisaged that many wind-power stations will be erected at windy coastal areas and highlands.

At the same time, the equipment of existing power stations and electric power system will undergo technical renovation, so that generating capacity will be increased and produced power used effectively.

Great efforts will be devoted continuously to the development of the coal-mining industry to ensure that 120 million tons of coal will be produced annually by the end of the plan.

For this purpose, steps are taken to develop more new coal mines while reconstructing and expanding on a large scale big coal mines with large deposits and good mining conditions, and to step up the modernization of coal mines.

The metal industry aims to produce 10 million tons of steel annually.

To this end, the Kim Chaek Iron and Steel Complex will have a large blast furnace, a large oxygen converter and a sintering furnace newly built and this will bring its steel production to more than five million tons.

The Hwanghae Iron and Steel Complex, the Chollima Steel Complex, the Songjin Steel Complex and other iron works and steel plants will be reconstructed on an expansion basis so as to increase the steel production capacity.

In the meantime, the rates of production of alloy and special steels including high-speed and stainless steels will be raised markedly by making wide use of various new alloying elements, and the variety of standard steels and the output of metal goods of the second-stage processing will be increased. In the production of rolled steel, in particular, the output of section steels and plates will be augmented, the rate of cold-rolling raised and the manufacture of stainless steel plates, silicon steel sheets, high-pressure tubes, galvanized sheet iron, white iron plates and chromium-galvanized plates boosted considerably. Steel output will be increased by improving the metallurgical processes based on the domestic fuel, new varieties of steels will be developed and various ferro-alloys turned out by using domestic alloying elements.

During the period of the plan, it is envisaged to produce more than 1.7 million tons of nonferrous metals annually.

Great efforts will be concentrated on the mines in Komdok, Tanchon, and Ryanggang Province where high-grade ores are inexhaustibly deposited, so that the output of lead, zinc, copper and gold will be increased sharply and a marked development will be attained in the production of light metals by using domestic resources. Thus, during the plan period the raw materials of light metals which are extremely abundant in our country will be processed in a comprehensive way, so that the output of aluminium and aluminium alloy will reach 400,000 tons.

During the same period the production of the engineering industry is expected to increase 2.5 times so as to satisfy the demands of different branches of the economy for machinery and equipment. The production of machine tools will increase sharply and their assortment expand and, in particular, the output of numerically-controlled machine tools, process-centring lathes, large and special machine tools will rise greatly. It is also expected that the heavy machine, motorcar and tractor industries, mining-building and farm-machine industries and ship-building industries will develop further.

It is a cardinal task of the new long-term plan to develop rapidly the electronic and automation industries. Great efforts are to be made for the development of the electronic industry and, in particular, the ultraminiature electronic and automation industries, and thus the production of integrated circuit and various other electronic and automation elements, control devices, electronic computers and electronic goods for daily use will be sharply increased. The robot industry will be developed on a large scale.

During the plan period the building-materials and timber industries will also develop rapidly. The annual output of cement will reach 22 million tons by 1993.

In this period transport will be developed quickly, with the result that railway freight carriage increases 1.6 times, motor freight transport 2.6 times, major trunk roads will be converted into expressways and the pavement of all the other roads completed.

Problems of Food, Clothing and Housing

President Kim Il Sung said that it is one of the most important tasks to be fulfilled during the Third Seven-Year Plan to bring about a radical improvement in the people's livelihood, and that during the new long-range plan we should adequately solve the problems of food, clothing and housing for the people and thus raise the people's living standards still higher.

In the same period, great efforts will continuously be made for the development of agriculture so as to yield 15 million tons of grain annually including more than 7 million tons of rice to supply the entire people only with rice and lay up plenty of food reserves. To this end, agriculture will be highly industrialized and 300,000 hectares of tideland be reclaimed to increase the cultivated land.

At the same time, we will thoroughly apply the Juche method of farming and thus put the methods of crop cultivation on a more scientific basis, and expedite the green revolution to breed more superior high-yielding strains, and sharply increase per-unit-area crop yields.

In the meantime, it is expected to increase the production of vegetables and industrial crops and develop livestock farming and fruit culture. In the plan period, the production of meat will reach 1.7 million tons, eggs more than 7,000 million, and fruit more than 2 million tons annually. In the fishing industry the annual output of seafood will reach 11 million tons, of which over 3 million tons will be fish. To make a revolution in light industry is an important task of the new long-term plan. Efforts will be made, first of all, for the development of the textile industry so as to modernize the existing textile equipment and install more up-to-date textile machines, thus producing 1,500 million metres of cloth a year. Efforts are to be devoted to the development of the shoe industry to make the assortment of shoes more diversified, produce and provide more and varied shoes to the working people at different seasons to suit their tastes. A change is to be brought about in the development of the food industry; the production of daily necessities will be increased radically, with the result that women will be relieved from the burdens of household chores and the ever-increasing needs of the people be fully met. In particular, more up-to-date factories manufacturing various packing materials for the processed foodstuffs will be built, and the packing of light industrial products further improved.

The production of consumer goods will increase 2.5 times as a result of continuous and simultaneous development of large centrally-controlled industries and small and medium local industries. At the same time, it is expected to establish more branch factories, shops and workteams manufacturing necessities of life in every sector of the economy, every factory and enterprise and to form housewives' workteams and sideline teams in towns, workers' districts and farm villages so as to bring about a new upsurge in the production of consumer goods.

The chemical industry is to turn out annually more than 7.2 million tons of chemical fertilizers, 225,000 tons of chemical fibre, more than 500,000 tons of synthetic resins and plastics. In the plan period the production of sodium carbonate will increase 4.5 times, caustic soda 2.1 times and sulfuric acid 3 times.

The long-term plan envisages the complete solution of the housing problem by building modern houses for 150,000 to 200,000 families in urban and rural communities every year. In the construction of dwelling houses the proportion of houses with many rooms including 3-4 roomed flats will rise so that the housing area per capita will increase more than 1.3 times.

During the long-term plan period the retail trade turnover will increase 2.1 times and more commodities will be supplied to the countryside so that the working people's growing demands for commodities can be met satisfactorily.

With the rapid development of agriculture, fisheries and light industry, each person will in 1993 have 175 grammes of meat, over 400 grammes of fish, an egg, 30 grammes of cooking oil, 300 grammes of fruit and 100 grammes of confectionery a day, and 76 metres of cloth a year. As a result, the Korean people will solve the problems of food, clothing and housing on a higher level and come to realize their age-old desire to live a happy life, eating rice and meat soup and wearing silk clothes in tile-roofed houses.

For the Successful Accomplishment of the Third Seven-Year Plan

Measures have been taken to fulfil the Third Seven-Year Plan with success.

The most important thing in carrying out the new long-term plan is to develop science and technology and step up the technical renovation drive and thus push forward the technical reconstruction.

For this purpose, work is carried on to draw out a plan for the development of science and technology in keeping with the long-range targets, actual needs and the world's trend of progress of science and technology, to enlist actively the creative abilities of scientists, technicians and broad working people in its accomplishment, and to make functionaries establish a correct viewpoint about science and technology and radically improve their guidance of and material supply to scientific research work and technical renovation movement.

At present a major target set by Korea in the development of science and technology is to materialize overall technical reconstruction of the economy. So, measures have been taken to build up in a short space of time the solid production foundation of the engineering, ultraminiature electronics and robot industries by concentrating great efforts on their development and to produce and supply various up-to-date machinery and equipment, electronic and automation elements and devices needed for the technical reconstruction of the economy.

Along with this, the production capacities of the key industries are radically expanded. Steps are taken in the key industries to replace the existing equipment of factories and enterprises with more efficient and precise modern one and increase their production capacity to the maximum and, at the same time, build a great many new up-to-date factories and enterprises.

In order to fulfil the long-term plan successfully attention is directed to radically improving the guidance of the economy and enterprise management.

As required by the Taean work system, all factories and enterprises under the collective leadership of the Party committee are carrying out the tasks of organizing economic work to the last detail, inspiring the producer masses with zeal and creativity by giving priority to political work and of placing the guidance of the economy and enterprise management on a scientific and rational basis. In this connection, steps are taken to conduct management activity in a scientific way on the basis of correct planning, calculation and statistics and rationalize enterprise management through proper use of different economic levers.

Although the tasks of the Third Seven-Year Plan are vast, it will be accomplished successfully. The Korean people have overcome manifold hardships through displaying the spirit of self-reliance and hard struggle and in this course have hardened their faith, built up their strength and gained rich experiences.

Inspired with splendid vistas, the Korean people are now making vigorous advance, determined to bring about a new upsurge.

Printed in the Democratic People's
Republic of Korea

No. 00899

PROSPECTIVE GOALS OF THE THIRD SEVEN-YEAR PLAN
(1987-1993)

Electric power—100,000 million kwh
Coal—120 million tons
Steel—10 million tons
Nonferrous metals—over 1.7 million tons
Cement—22 million tons
Grain—15 million tons
Marine products—11 million tons
Chemical fertilizers—7.2 million tons
Fabrics—1,500 million metres
Tideland reclamation—300,000 hectares

PYONGYANG, KOREA 1990